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11/25/85
Pulaski*

WORK PLAN

For

Compliance with the Underground

Tank Leak Monitoring Regulations and Guidelines

of the Los Angeles County

I-10475-2

Prepared for

MR. WILLIAM ANDREWS
Property Manager
19500 S. Normandie and
1227 Knox Street
Torrance, California 90502

I-10581-2

By

Enviropro, Inc.
Michael M. Uziel, Ph.D.
Project Manager

November 1985

Project No. 11101

November 14, 1985

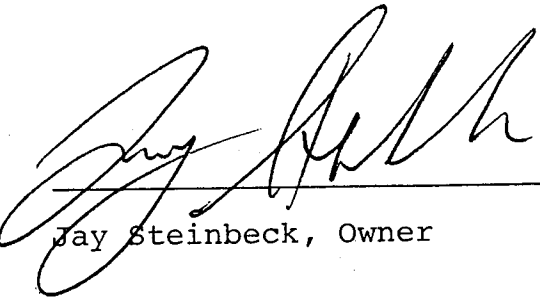
Enviropro, Inc.
11927 Estrada Lane
Northridge, California 91326

Attention: M. Uziel

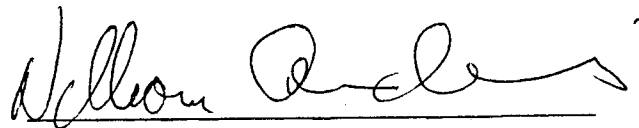
Dear Mr. Uziel:

We have reviewed your work plan for the removal of three underground tanks at 19500 South Normandie Street and the closure in place of eleven underground tanks at 1227 Knox Street. We approve of Enviropro's work plan, but would like to point out that this property has had a negative cash flow for sometime so would like to complete this work as soon as possible.

Very truly yours,



Jay Steinbeck, Owner



William Andrews, Plant Manager

ENVIRONMENTAL-HAZARDOUS WASTE AND CHEMICAL TECHNOLOGY

November 12, 1985

Mr. William Andrews
Property Manager
19500 S. Normandie and
1227 Knox Street
Torrance, CA 90502

Dear Mr. Andrews:

Enclosed is Enviropro Inc.'s work plan for compliance with the Los Angeles County Underground Tanks Ordinance and Guidelines.

The plan will be finalized and implemented after review and approval by you and the Los Angeles County Engineer's office.

For any questions by you or other reviewers, please call me at (818) 366-5682.

Very truly yours,



ENVIROPRO, INC.

Michael M. Uziel, Ph.D.

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1. INTRODUCTION

Mr. Jay Steinbeck currently owns two properties located at 19500 S. Normandie and 1227 Knox Street, Torrance, California. The properties include the underground tanks described in Table 1.1 below. This plan intends to bring the two sites into compliance with regulations and guidelines related to detection of potential chemical leaks from underground tanks and proper abandonment of the tanks according to the regulations and guidelines of the County of Los Angeles as administered by the Department of the County Engineer-Facilities, Sanitation Division.

TABLE 1.1

<u>Tanks: Number and Location</u>		
<u>Location</u>	<u>No. of Tanks</u>	<u>Size each (gal)</u>
A. 19500 S. Normandie	3	5000
B. 1227 Knox St.	11	7500

The tanks were used for storage of raw materials used by paint industries who occupied the site.

The Los Angeles County Engineer has published Guidelines for Underground Tanks (underground storage of hazardous materials, Guidelines, October 1984) that are used in this plan. The work generally includes location of the tanks, soil borings; sampling and analysis of soil and/or ground water; and formal procedures for reporting the results to the Los Angeles County Engineer.

The soil testing, closure, and monitoring of the tanks is described in detail in the body of this plan. The current plan is to remove the three tanks at 19500 S. Normandie and to properly abandon, in place, the eleven tanks at 1227 Knox St.

2. PLANS REGARDING THE UNDERGROUND TANKS

2.1 Tanks' Inventory

The location and future plan regarding each tank is described in Table 2.1 below:

TABLE 2.1

Plan for Underground Tank Management

No.	Tank Contents	Volume (gal)	Location ⁽¹⁾	Action Plan
1A	Recycled ⁽¹⁾ Solvent (R.S.)	5,000	A	Remove the tank
2A	(R.S.)	5,000	A	Remove the tank
3A	(R.S.)	5,000	A	Remove the tank
1B	Isopropanol	7,500	B	Close in place
2B	Naphtha	7,500	B	Close in place
3B	Naphtha	7,500	B	Close in place
4B	Toluene	7,500	B	Close in place
5B	Standard Paint Thinner	7,500	B	Close in place
6B	Gasoline	7,500	B	Close in place
7B	Xylene	7,500	B	Close in place
8B	Keltrol(1074)	7,500	B	Close in place
9B	5306	7,500	B	Close in place
10B	Lustrasol	7,500	B	Close in place
11B	5150	7,500	B	Close in place

Locations A= 19500 S. Normandie; B= 1227 Knox Street

(1) The recycled solvent contains mainly paint thinner and other aliphatic and aromatic solvents

Based on the area's general geohydrology, it is assumed here that the ground water is deeper than 40 ft. This information will be confirmed in the field by an initial exploratory boring at the beginning of the work.

2.2 Tanks' Closure at Location A

7-10475-2 The three tanks at location A will be closed by removal from the ground. The soil under each tank will be sampled by obtaining two core soil samples under each tank as described in Appendix A. The soil will be analyzed according to the EPA methods described in Section 3, Table 3.1. Applications for closure permit are presented in Appendix 7.2.

2.3 Tanks' Closure at Location B

The client elected to close all its underground tanks in location B by permanent closure (abandonment) of the tanks in place. This closure will be performed according to the L.A. County Engineer's Guidelines, Chapter VI, Section A. 1, 2, 3, 4, 6 and condition A and D listed in the County of Los Angeles' "Application for Closure, Hazardous Materials Underground Storage." These two publications describe in detail the closure requirements and use of materials for filling the tanks. The following are highlights of the proposed closure requirements:

A. The closures of the tanks, in place, shall comply with Los Angeles County Fire Department, Fire Prevention Division, Supplement #A - Inspection Guide #6.

B. Site integrity will be demonstrated as follows:

7-1 B.1 Test borings shall be slant drilled to intercept a point beneath the center of the tank, if possible. If it is discovered during field work that slant drilling is not feasible, the test borings may be drilled vertically and the reason stated in the report.

B.2 For the multiple eleven tank, Group B, slant borings are not feasible because of space limitation and lack of "as built" drawings. Eight borings shall be placed at 20 ft. intervals around the tank cluster as illustrated in Drawing No. 1. We believe

that these borings will detect well chemical leaks from the tanks, if any.

B.3 Undisturbed soil samples shall be taken at depths of 5, 10, 20, 30, and 40 feet below grade level.

B.4 A split spoon sampler will be used for taking all soil samples.

B.5 Soil samples shall be capped immediately with aluminum foil.

B.6 Soil samples shall not be extruded in the field but are to be immediately placed in a refrigerated ice chest and transported to a state certified laboratory for analysis, using suitable methods. The analysis will be of the composite of the five soil samples obtained at each hole.

B.7 A report containing the results of the above analysis shall be submitted to the County Engineer.

C. If the soil analysis in B. above indicates the presence of contaminants, the RWQCB and/or the County Engineer may require a site investigation as described by the RWQCB Guidelines and in Chapter V of the County's "Underground Storage of Hazardous Materials - Guidelines."

D. If such an investigation is required, a report shall be submitted to the RWQCB, the designated lead agency, and to the County Engineer. The report will contain the results of the site investigation.

E. After demonstration of site integrity and approval by the County Engineer, the tanks will be abandoned according to the detailed procedure described in the L.A. County Guidelines in Chapter VI, referenced above, and conditions A and D of the L.A. County "Application for Closure, Hazardous Materials Underground Storage." Such application and the appropriate fee will be submitted with the closure report and plan.

3. CHEMICAL ANALYSIS

Chemical analysis will be performed according to EPA

procedures when available, or the procedure described in this Chapter. Tables 3.1 and 3.2 below describe the analytical procedures proposed for this work.

4. WORK SCHEDULE

The proposed work schedule is presented below. It will be revised periodically according to the project and review progress.

TABLE 3.1
Analytical Procedures for
Soil Analysis

No.	Boring No.	Associated Tank(s)	Tank(s) Past/Present Content(s)	Recommended Analytical Procedure(s)
1	1AA, 1AB	1A	Recycled solvents (1)	4
2	2AA, 2AB	2A	Recycled solvents	4
3	3AA, 3AB	3A	Recycled solvents	4
4	1B, 2B	1B	Isopropanol	3
5	1B, 2B	2B	Naphtha	5
6	2B, 3B	3B	Naphtha	5
7	3B	4B	Toluene	5
8	3B, 4B	5B	Std. Paint Thinner	4
9	4B	6B	Gasoline	5
10	4B, 5B	7B	Xylene	5
11	6B	8B	Keltrol (2)	3
12	6B, 9B	9B	Resin #5306 (2)	3
13	7B, 9B	10B	Lustrasol (2)	3
14	7B, 8B	11B	Resin #5150 (2)	3

(1) The recycled solvents that contain mainly paint thinner and other aliphatic and aromatic solvents.

(2) Organic resin used in paint manufacturing to be analyzed by gas chromatography with FID detector.

TABLE 3.2

Recommended Analytical Procedures

With the exception of "Trim Sol Lubricant," all compounds will be analyzed by gas chromatography using FID detector. Analysis will be performed on composite of soil samples obtained from each hole. Sample extraction and composition will be performed in the laboratory.

Procedure 1

Column 6 ft. x 2 mm methyl silicone base packing "UCW 982." Injector 250°F, column temp: 40-230°F @ 10°F/min, detector 250°F with He as carrier gas at 25 ml/min. Soil extracted with Methylene chloride

Procedure 2

Same as 1 above but column packing is supleco's "carbopack C" with 1% SP 1000. Soil extraction will be performed with Methylene chloride.

Procedure 3

Same as 2 but soil extraction will be performed with carbon disulfide (CS₂).

Procedure 4

EPA Method No. 418.1 for petroleum based hydrocarbons.

Procedure 5

EPA BTX Method No. 8020

TABLE 4.1Proposed Tentative Work Timetable⁽¹⁾

<u>Item</u>	<u>Approximate Date</u>
1. Submittal of this plan to the client and to the Los Angeles County Engineer's office for approval.	November 13, 1985
2. Study and approval of this plan by the client and the regulatory agencies.	November 26, 1985
3. The client and Enviropro meeting with the staff of the L.A. County Engineer for presentation and discussion of the proposed work and timetable, if necessary.	November 25-29, 1985
4. Marking of underground utilities by underground alert and city of L.A. representatives.	November 25-29, 1985
	<u>Working Days After Approval</u>
5. Mobilization of drilling and field equipment.	11
6. Marking of drilling locations; mobilization and steam cleaning of drill stems.	11-16
7. Drilling and soil sampling, tanks removal by client	11-16
8. Laboratory analysis.	17-27
9. Preparation of first report and submittal to the client.	23-38
10. Review of report by the client.	38-43
11. Submittal of first report on site integrity and recommendations for work progress to the Los Angeles County Engineer's office.	44

⁽¹⁾Detailed timetable will be drafted and submitted to the County Engineer's office, after the approval of this plan by the County and consultation with the client.

5. REPORTING

The project report will include assessment of the site integrity. If no contamination is found, the final report will also include a closure plan.

6. PROFESSIONAL EXPERIENCE AND QUALIFICATIONS

Enviropro, Inc. has been involved in underground contamination investigations and geohydrological studies for five years. Since 1961 the team members have had experience with ground water wells of all types including the monitoring of wells in Southern California and in other western states. The expertise, experience, and reputation of the Enviropro team in the areas of geohydrology, leak detection and investigations, monitoring well installations, water and soil contamination chemistry, and helping industry comply with the maze of environmental regulations is unique. We have demonstrated:

- o Familiarity with the local geology and geohydrology;
- o The ability to perform ground water and contamination studies;
- o The ability to design, install, and sample monitoring wells;
- o Familiarity with the regulations and their proper interpretation and applications in a professional and cost-effective manner;
- o A professional working relationship with local, state and federal regulatory agencies;
- o A knowledge of chemistry and environmental engineering as related to chemicals and their interaction with tanks, utilities, soils, and ground water;

Enviropro, Inc., headed by Dr. M. Uziel, specializes in the chemistry of ground water and soil contamination, liquid and solid waste, environmental engineering, hazardous waste remedial action, spill investigation, and reporting for compliance with government regulations. Enviropro has performed underground tank leak detection field work and studies for several industries in Southern California. It has also interacted with government agencies on this subject years before the institution of current regulations. In

1982-83, Dr. Uziel spent most of his time in Northern California performing installations of underground tank leak detection monitoring wells, soil borings, and studies of underground tank leaks. Most of this work was with the electronic industry in the "Silicon Valley" in response to similar regulations enacted earlier by the State Regional Water Quality Control Board in Northern California. Dr. Uziel will serve as project manager and engineer on the current project.

We believe that our organization can offer a unique package by providing practical field experience and theoretical knowledge, while acting as a liaison between industry and governmental agencies. Our local presence provides for an efficient and timely response to our clients' needs.

7. REFERENCES

1. Underground Storage of Hazardous Materials - Guidelines, County of Los Angeles Department of County Engineer - Facilities, Sanitation Division, October 1984.
2. California Regional Water Quality Control Board, Los Angeles Region Underground Tank Monitoring Guidelines.

APPENDIX 7.1

Procedure for Obtaining Soil Samples after Removal of Underground Tanks

Soil Sampling, Storage, and Transport Procedures
For Underground Tank Closure

1. After tank removal examine excavation for presence of backfill sand.
2. If sand is present, excavate about 1-2 feet to reach the undisturbed native soil.
3. If sand backfill was not used, excavate about 0.5 to 1 foot to reach undisturbed native soil.
4. Core sampling tube(s) should be of material compatible with the designated analysis or suspected contamination if any.

4.1 Tubes Used

Dimensions: A. 6 inch long x 1.5 inch diameter _____
B. Other _____

Material of construction
Brass _____ Stainless steel _____
Other _____

5. Tubes should be thoroughly cleaned with detergent, rinsed with hot tap water followed by dionized water rinse, and then steam cleaned. The tubes should be free of any contaminants that may cause erroneous results.
6. Core samples should be taken by force driving the tubes into the undisturbed soil.
7. If any kind of drilling equipment and/or split spoon sampler(s) are used, they should be thoroughly cleaned with high pressure water at 800-1000 p.s.i.g. and steam.
8. The sample tubes should be wrapped with aluminum foil so as to prevent escape of vapors from the end and then be placed in a "zip lock" plastic bag, sealed and labeled on the outside with the sample I.D. number and other details. Stick-on labels should not be placed on the sample tube or inside the bag.
9. The labeled bag should be placed inside an additional "zip lock" bag and sealed.
10. Samples should be stored in a new styrofoam container with sufficient ice or dry ice to keep the temperature no higher than

4°C. Water samples should not be stored on dry ice to prevent breakage of container due to water expansion due to freezing.

11. The chain of custody document should be completed, indicating sampling dates and the handling chain of people and/or organization(s).
12. Samples should be shipped to the laboratory by an Enviropro, Inc. company employee or a reliable carrier and should not be in transit more than 12 hours if possible.
13. If a commercial carrier is used for sample transport, the laboratory should be notified by phone of the projected sample arrival time, and sample arrival should be confirmed with Enviropro, Inc. by a telephone call from the laboratory. This procedure should be followed up by the project manager or his authorized representative. The carrier should sign the chain of custody document.

APPENDIX 7.2

Permit Application for
Closure of Tanks at Locations
1A, 2A, 3A

**APPLICATION FOR CLOSURE
HAZARDOUS MATERIALS UNDERGROUND STORAGE
COUNTY OF LOS ANGELES
DEPARTMENT OF COUNTY ENGINEER-FACILITIES SANITATION DIVISION
550 SOUTH VERMONT LOS ANGELES, CALIFORNIA 90020**

OWNER:

NAME Mr. Jay Steinbeck C/O Mr. William Andrews, Plant Manager
ADDRESS Mail Boxes Etc 14755 Ventura CITY Sherman Oaks STATE Ca ZIP 91403
Boulevard, Sherman Oaks, Ca. 91403

FACILITY:

NAME None
SITE ADDRESS 1 19500 S. Normandie CITY Torrance ZIP 90502
MAILING ADDRESS SEE "OWNER" CITY STATE ZIP
CONTACT PERSON Mr. WILLIAM ANDREWS TITLE Plant Manager PHONE 818 9905930

CLOSURE REQUESTED:

☐ TEMPORARY (REFER TO CONDITIONS A AND B ON BACK OF THIS FORM)

EFFECTIVE DATE OF CLOSURE _____

DATE OPERATION WILL RESUME _____

☒ PERMANENT, TANK(S) REMOVAL DISPOSAL DESTINATION Scrap iron
(REFER TO CONDITIONS A AND C ON BACK OF THIS FORM)

☐ PERMANENT, TANK(S) IN PLACE
(REFER TO CONDITIONS A AND D ON BACK OF THIS FORM)

TANK(S) DESCRIPTION: (ATTACH ADDITIONAL LIST IF NECESSARY.)

TANK NO.	MATERIAL	AGE (YEARS)	CAPACITY (GAL)	MATERIALS STORED (PAST AND PRESENT)
1A	STEEL	21	Approx. 5000	Recycled Solvent, Mainly paint Thinner
2A	SAME AS NO. 1A	←	←	←
3A	SAME AS NO. 1A	←	←	←

HAS ANY UNAUTHORIZED DISCHARGE EVER OCCURRED AT THIS SITE? YES ☐ NO ☒

HAVE STRUCTURAL REPAIRS EVER BEEN MADE ON THESE TANKS? YES ☐ NO ☒

WILL NEW UNDERGROUND TANKS BE INSTALLED FOLLOWING CLOSURE? YES ☐ NO ☒

WILL ANY WELLS, INCLUDING MONITORING WELLS, BE ABANDONED? YES ☐ NO ☒

* Based on informatin supplied by Mr. W. Andrews

IF THE RESPONSE TO ANY OF THE ABOVE QUESTIONS IS YES, ATTACH EXPLANATION.

BY SIGNATURE BELOW THE APPLICANT CERTIFIES THAT HE/SHE HAS READ AND UNDERSTANDS THE CONDITIONS ON THE REVERSE SIDE OF THIS FORM AND THAT THE STATEMENTS AND DISCLOSURES ABOVE ARE TRUE AND CORRECT.

APPLICANT'S SIGNATURE *M. W. Andrews*

DATE Nov. 12. 1985

OWNER ☐

OPERATOR ☐

CONTRACTOR Consultant. Enviropro. Inc.

STATE LICENSE NO. _____

TO BE COMPLETED BY THE COUNTY ENGINEER

BY SIGNATURE BELOW APPLICANT IS GRANTED APPROVAL TO PROCEED WITH THE CLOSURE.

FEE COLLECTED \$ _____

PERMIT NO _____

FILE NO _____ R/C _____

DATE _____

TO ARRANGE FOR AN INSPECTION, TELEPHONE _____

CONDITIONS A -- GENERAL

Closures shall be carried out such that all applicable regulations from the following agencies are complied with: Los Angeles County, Department of County Engineer-Facilities; Los Angeles County Fire Department, Fire Prevention Division or the appropriate City Fire Department; South Coast Air Quality Management District; and Los Angeles County Department of Health Services.

The County Engineer and Fire Departments shall be notified in advance of any closure in accordance with the following:

- a. Removal of tank shall require a three (3) business day advance notification.
- b. Permanent closure of a tank in place or a temporary closure shall require a 30 day written notification.

A fee of \$38 per tank shall accompany this application.

All abandoned wells shall be destroyed in such a way that they will not produce water or act as a channel for interchange of water, when such interchange may result in deterioration of the quality of water in any or all water bearing formations penetrated, or present a hazard to the safety and well-being of people and animals.

A well destruction permit issued by the Los Angeles Department of Health Services shall be required for all wells requiring a permit for their initial construction.

Well destruction shall be accomplished according to methods described in the latest "Water Well Standards: State of California" by the Department of Water Resources, contained in Bulletin 74-81, December 1981, or any other methods that will provide equivalent or better protection.

Plans for the decontamination of a facility shall be submitted to the County Engineer for approval no later than 30 days before the commencement of such operations. Other agencies having jurisdiction shall also be notified. These agencies include the California Regional Water Quality Board, the Los Angeles County Department of Health Services, and the South Coast Air Quality Management District.

Decontamination shall require the following, as a minimum:

- a. Cleaning operation shall be done under the supervision of persons who understand the hazardous potential of the original liquid stored and its components.
- b. The personnel shall be sufficiently skilled to safely carry out such operation.
- c. Contaminated materials removed from such facility shall be disposed of at legal point of discharge.
- d. The operation shall be carried out in a manner that will not endanger the health of the public and the environment.

CONDITIONS B -- TEMPORARY

All temporary closures shall be carried out as indicated in Los Angeles County Fire Department, Fire Prevention Division, Supplement #A -- Inspection Guide #6, "Abandonment or Removal of Underground Tanks," Part A and any other applicable Parts.

A temporary closure shall not exceed 90 days.

CONDITIONS C -- PERMANENT, TANK(S) REMOVAL

1. All tank removals shall be carried out as indicated in Los Angeles County Fire Department, Fire Prevention Division, Supplement #A -- Inspection Guide #6, Part D and any other applicable Parts.
 2. Owners/operators shall notify the Building Department having jurisdiction at the place of removal if a grading permit is necessary.
 3. Removed tanks shall not be transported away from the site until an inspection to establish site integrity is carried by the County Engineer.
 4. If an appointment has been arranged with a County Engineer inspector to inspect the removal of a tank, the inspector will only wait at the site a reasonable amount of time (approximately one hour) after arriving for the removal to commence. Another closure fee may be charged if the inspector has to return to the site.
 5. After inspection, tanks shall be transported to a legal disposal point.
 6. If the tank had stored materials other than motor fuel, fuel oil, or waste oil, site integrity shall be demonstrated using the soil sampling and analysis procedures described in CONDITIONS D below.
 7. The site shall be backfilled and recompact to a relative compaction of 90%.
- ## CONDITIONS D -- PERMANENT, TANK(S) IN PLACE
1. All permanent closures of tanks in place shall comply with Los Angeles County Fire Department, Fire Prevention Division, Supplement #A -- Inspection Guide #6, Parts B or C, and any other applicable Parts.
 2. Owners/operators shall demonstrate part site integrity as follows:
 - a. Test borings shall be slant drilled to intercept a point beneath the center of the tank, if possible. If slant drilling is not feasible, the test borings may be drilled vertically and the reason stated in the report in 2.h. below.
 - b. For single tanks, a minimum of two test borings will be required, each located on opposite sides of the tank along the major axis of the tank.
 - c. For multiple tanks, as a minimum, borings shall be placed at 20 foot intervals around the tank cluster. The actual number and location of borings shall be evaluated on a case-by-case basis. Tanks separated by 20 feet or more shall be considered single tanks for the purposes of test location and placement.
 - d. Soil samples shall be taken at depths of 5, 10, 20, 30 and 40 feet below grade level.
 - e. A Shelby Tube or a Modified California Sampler shall be utilized for taking all soil samples.
 - f. Soil samples shall be capped immediately with teflon or aluminum.
 - g. Soil samples shall not be extruded in the field but are to be immediately placed in a refrigerated ice chest and transported to a state certified laboratory for analysis, using suitable methods.
 - h. A report containing the results of the above analysis shall be submitted to the County Engineer.
 3. If the soil analysis in 2. above indicates the presence of contaminants, the County Engineer shall require a site investigation as described in Chapter V of the County's "Underground Storage of Hazardous Materials -- Guidelines."
 4. A report shall be submitted to the County Engineer containing the results of the site investigation.

APPENDIX 7.3

Boring Locations